Supreme Court, U.S.
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No. 01-714

In The
SUPREME COURT OF THE UNITED STATES

Utah, et al.,
Appellants
v.
Donald L. Evans, Secretary of Commerce, et al.,
Appellees

On Appeal from the U.S. District Court for the District of Utah

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BRIEF OF SOUTHEASTERN LEGAL FOUNDATION, INC. AS *AMICUS CURIAE* IN SUPPORT OF APPELLANTS

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QUESTION PRESENTED

Whether statistical methods used in the 2000 Census which impute the existence of imaginary occupants in imaginary households for purposes of apportionment comply with the census clause's requirement of an "actual enumeration"?

Whether "nearest neighbor imputation," a method of statistical estimation that was part of the plan declared illegal in *Department of Commerce v. House of Representatives*, 525 U.S. 316 (1999), violates the ban on statistical sampling in 13 U.S.C. § 195?

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INTEREST OF THE AMICUS CURIAE*

Amicus Curiae, the Southeastern Legal Foundation, Inc., is a non-profit public interest organization that promotes the public interest in the proper construction and enforcement of the laws and the Constitution of the United States. The Southeastern Legal Foundation ("SLF") was established in Georgia for the purpose of participating in the public policy process and engaging in litigation in the public interest. In addition to legislative initiatives and promulgation of programs designed to inform and educate the public, the organization's attorneys represent plaintiffs in courts throughout the country to enforce laws advancing its interests through litigation.

In particular, the SLF's former president was the lead plaintiff in the case of *Clinton v. Glavin*, 525 U.S. 316 (1999), the companion case in this Court decided with *House of Representatives v. Department of Commerce*. Having prevailed in that case against the use of statistical estimation techniques in the 2000 Cenus, SLF has a vital and direct interest in prohibiting the Federal Government's attempt to circumvent that decision by using some of the exact same statistical techniques that were previously barred by this Court.

SLF has obtained permission to file this brief from all parties hereto. Their letters of consent have been filed with the Clerk pursuant to Rule 36.

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* This brief is authored in its entirety by the attorneys for SLF identified on the cover, and no person or entity other than SLF, its members or its counsel has made any monetary contribution to the preparation or submission of this brief.

SUMMARY OF ARGUMENT

The Constitution requires an "actual Enumeration" of "whole persons." U.S. Const., Art. 1, Sec. 2, cl. 3; U.S. Const. Amdt. XIV. These provisions were violated in the 2000 census when the Census Bureau, using a statistical estimation technique known as "nearest neighbor imputation," added to the apportionment headcount some 1.2 million people who were never actually enumerated or counted. Instead, they were invented so as to fill in the blanks for housing units whose occupancy status, let alone the number of occupants, was unknown even after delivery of a mail survey form and six follow up visits. Statistical methods which alter the balance of political power by conjuring imaginary people out of thin air do not comply with the requirement of actual enumeration. This actual enumeration requirement of the Constitution cannot be erased by legislative or executive fiat disguised as discretion in selecting the methods by which the census is to be taken. The actual enumeration clause is designed to protect the census from any form of manipulation, partisan or otherwise, which might arise by the application of any and all methods of estimation, including imputation in all its many varieties.

Nor can nearest neighbor imputation be squared with the statutory ban on "the statistical method known as 'sampling'" in 13 U.S.C. § 195. Sampling as used in the statute was construed in light of the census clause and the history of the census in *Department of Commerce v. House of Representatives*, 525 U.S. 316 (1999) to prohibit techniques of statistical estimation. The attempt by the appellees to limit the definition of "sampling" in the statute to "random sampling" ignores the relationship between the statute and the relevant constitutional requirements, and ignores the indisputable point that Congress knows how to say "random sampling" when it means to. Moreover, it

ignores the fact that nearest neighbor imputation was one of the methods of statistical estimation that was to be used in the census plan invalidated in *Department of Commerce v. House of Representatives*. 13 U.S.C. § 195 should be construed to avoid the absurdity of holding that Congress in the Census Act has forbidden the more reliable random sampling but allowed less reliable nonrandom statistical sampling.

ARGUMENT AND CITATION OF AUTHORITY

I. THE PROHIBITION ON SAMPLING IN 13 U.S.C. § 195 IS NOT LIMITED TO "RANDOM SAMPLING."

The statutory issue in this appeal is whether the definition of the term "sampling" as used in 13 U.S.C. § 195 includes the form of imputation used in the 2000 census.

Before the Census Bureau began trying to win this lawsuit with a narrow definition of sampling, it defined the term broadly enough to include imputation. "In our common experience, 'sampling' occurs whenever information on a portion of a population is used to infer information on the population as a whole." Census 2000 Report, AR at C00155. At this level of abstraction, imputation is certainly within the scope of the term "sampling." The Bureau itself described imputation under the heading "Reliance on Sampling in Previous Censuses." *Id.*

Now, in this litigation, the Census Bureau has changed its story on the nature of imputation. The Bureau's statutory argument goes as follows:

1. "sampling" as used in the statute means only "random sampling,"

2. the statistical method of estimation at issue in this case, imputation, is not random, and

3. therefore imputation is not prohibited by the statutory ban on sampling.

The Petersen Declaration, offered by North Carolina in proof of the contention that "sampling" means "random sampling" is unpersuasive. N.C. App. 1a-2a. Mr. Petersen was constrained to go no further than saying that "sampling" "usually" or "almost always" means "random sampling." *Id.* P7-8. Notably, he did not say "always" or "invariably." *Id.* This is because there are many ways to take a sample, and not all of them are random. Some have varying degrees of randomness, or are random only within certain subgroups, called "strata," and some are not random at all. There is a reason why statisticians use the adjective "random" to qualify the term "sampling," and that is to distinguish it from nonrandom sampling. And there is a reason why Congress, which certainly knows the difference between the two, did not qualify or limit the prohibition on sampling in § 195 to random sampling. The unstated, and false, premise of the argument is that Congress does not know how to say "random sampling" when it means to. There are eight statutes currently on the books in which Congress has used the exact phrase "random sampling," [1] and another in which it was twice used in the past but does not occur in the current version. [2] In addition, there are five current statutes which

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[1] 21 U.S.C. § 466; 21 U.S.C. § 620; 22 U.S.C § 4354; 38 U.S.C. § 3731; 42 U.S.C. § 615; 49 U.S.C. § 11501; 49 U.S.C. § 14502; PL 107-110, January 8, 2002.

[2] 42 U.S.C. § 11432

use the phrase "random sample"[3] and four others in which it was used in the past.[4] Congress has thus demonstrated on 19 separate occasions that it knows how to say "random sampling" or "random sample." In multiple other instances Congress has used the term "statistical sampling" with various modifiers such as "valid,"[5] "reliable,"[6] and "defined."[7] In this context, the inference arising from the absence of any such qualifier as "random," "valid" or "reliable" in § 195 is obvious and refutes the suggested limitation on which appellees rely.

The argument of the appellees amounts to a contention that Congress banned random sampling but left the door open for invalid and unreliable nonrandom sampling. This is absurd and rather ironic coming, as it does, from those claiming accuracy of estimation trumps all other considerations, including 200 years of contrary census history and an express Constitutional requirement of an actual enumeration. Instead, the prohibition of § 195 should be construed, as it was in *House of Representatives*, as "forbidding the use of estimation techniques in conducting the apportionment census." *House of Representatives*, 525 U.S. at 347 (Scalia, J., concurring). The argument that the prohibition on "sampling" as used in § 195 is limited "random sampling" is without merit.

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[3] 42 U.S.C. § 263b; 42 U.S.C. § 628b; 42 U.S.C. § 1315; 43 U.S.C. § 4822; PL 107-110, January 8, 2002.
[4] 26 U.S.C. § 89; 26 U.S.C. § 403; 38 U.S.C. § 1154; 42 U.S.C. § 681-687
[5] 7 U.S.C. § 1636f
[6] 42 U.S.C. § 7135
[7] 20 U.S.C. § 1078-9; 42 U.S.C. § 292f

II. IMPUTATION AS USED IN CENSUS 2000 VIOLATES 13 U.S.C. § 195.

Sampling in its essence involves both (a) acquiring data on less than the whole population and (b) using that data to draw inferences and make estimates about the whole population. Census 2000 Report, AR at C00155; Petersen Decl., N.C. App., P6 1a. There are a great many methods of accomplishing each of these tasks.

At issue in the *House of Representatives* case were two sampling programs, the Non Response Follow Up program, or "NRFU," and Integrated Coverage Management or "ICM." NRFU was intended to address that portion of the population that did not return the census questionnaire by mail. A random sample of those not responding were to be selected for follow up and actual enumeration. A sufficient number were to be selected to bring the total of those actually enumerated to 90% within a given census tract. This would vary from tract to tract because of varying rates of nonresponse.

Once 90% of the population had been actually enumerated, the Census would then use "estimation procedures" with respect to the remaining 10%. "The characteristics of the sample housing units will be used to estimate the characteristics of the housing units not in the nonresponse follow-up sample." Census 2000 Report, AR at C00161.

The particular estimation technique that the Census Bureau planned to use to estimate the characteristics of the remaining 10% of population that had not been enumerated was "nearest neighbor imputation." Robert E. Fay, Theory and Application of Nearest Neighbor Imputation in Census

2000, C01647. Nearest neighbor imputation is the method of imputation at issue in this case.

The "sampling" at issue in this case involves actual enumeration of 99.6% of the population and nearest neighbor imputation of the remaining 0.4%. The "sampling" at issue in the *House of Representatives* case involved actual enumeration of 90% of the population and nearest neighbor imputation of the remaining 10%.

The sampling at issue in *House of Representatives* was held to violate § 195 regardless of whether it was a "substitute" or a "supplement" for actual enumeration. Therefore, the difference between imputation of 10% and 0.4% is not legally significant. The technique was prohibited in *House of Representatives* and so it is prohibited here because in both instances it is sampling in violation of § 195.

It is insisted by North Carolina and by the Department of Commerce that this case is distinguishable from *House of Representatives* because the sampling in that case was random whereas there is no random sampling in this case. Apart from the argument in the preceding section, this contention is without merit because it misreads the importance of randomness to the invalidity of the NRFU program in *House of Representatives*.

The role of random selection in the Non Response Follow Up program in *House of Representatives* was limited to selection of those non-responding households that would be followed up and actually enumerated so as to raise the total of those actually enumerated to 90%. Once 90% actual enumeration had been achieved, the Bureau planned to use nearest neighbor imputation to estimate the remaining 10%.

The only point of distinction based on randomness between the method of imputation at issue in this case and

House of Representatives is that here the population from which the nearest neighbor "donor" units were selected consisted of all units actually enumerated in the non response follow up. This population was not randomly selected for such follow up. In *House of Representatives*, on the other hand, the eligible donors were limited to those enumerated as a result of their random selection for non response follow up. *Compare* Theory and Application of Nearest Neighbor Imputation, CO1651 with Federal Defendants' Responses to Interrogatories, N.C. App. 9a, 21a.

As North Carolina and the Federal government argue, the use of imputation in this case is different than estimation from a sample to a population as a whole, but these differences do not have the significance they suppose. In imputation, data for a single unknown unit is copied from a single "donor" unit. The donor unit is selected by the application of non-random criteria, usually geographic proximity. See Fay, CO1648-9. This is repeated for as many unknown units as remain in order to invent data for all of units which remain unknown after cessation of actual enumeration – 10% in the invalidated plan, 0.4% in this case. Once data for all unknown units has been fabricated in this manner, the completed data set is processed, including computation of a total population count for purposes of apportionment.[8]

Estimation for a population as a whole based on a sample, on the other hand, involves attributing to the entire population as a whole the characteristics and proportions of the randomly chosen sample as a whole. Thus, if the sample is 55% white, 30% Latino and 15% black, then the relative proportions of the whole population are taken to be the same.

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[8] This shows that imputation is neither data collection nor data processing. It is data invention.

With the imputation in this case, however, the proportions and totals were instead computed from data for the whole population, after it has been padded with imaginary people with imaginary characteristics living in imaginarily occupied units, all brought into the mix by the magic of imputation after the real people – if there were any – could not be found despite six attempts at follow up.

In nearest neighbor imputation, the donor units are selected by the non-random criteria of geographic proximity. Thus, when imputation rather than more conventional estimation is used, randomness of the donor population is not a meaningful factor. Since imputation was the technique of estimation at issue in *House of Representatives* and the technique used in this case, *House of Representatives* may not be distinguished on the illusory basis that it significantly involved random sampling whereas this case does not. Instead, both cases involve prohibited sampling in which information from less than the whole is used to make estimates about the whole population.

III. IMPUTATION AS USED IN THE 2000 CENSUS VIOLATES THE ACTUAL ENUMERATION REQUIREMENT OF THE CENSUS CLAUSE

In the *Clinton v. Glavin* case, the Southeastern Legal Foundation argued that the actual enumeration clause barred use of methods of estimation in the apportionment count. This position was supported by a thorough survey of the history of the census clause, including the policies which motivated its adoption, the contemporary understanding of the framers, including George Washington and Thomas Jefferson, and the consistent historical position of the Census Bureau prior to the Clinton Administration. The concurring

opinion of Justice Scalia in *House of Representatives*, joined by three other Justices, articulated the point this way:

> For reasons of text and tradition, fully compatible with a constitutional purpose that is entirely sensible, a strong case can be made that an apportionment census conducted with the use of "sampling techniques" is not the "actual Enumeration" that the Constitution requires.

525 U.S. at 349. The Utah parties to this case will make a similarly thorough presentation and so there is no need to further burden the record on this point.

It is sufficient to point out that Utah lost a congressional seat and a vote in the electoral college to North Carolina because, by means of imputation, the Census Bureau included in the head count some 1.2 million imaginary people it could not find even after a mail survey and six follow ups. As Utah has pointed out, there were two stages of imputation which conjured people out of thin air. Housing units whose status was unknown were imputed a status of occupied or vacant, and, for those deemed occupied, the number of occupants was imputed as well.[9] Whatever else may be said, it is incontestable that double imputation is not even close to "actual enumeration."

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[9] "The overall design was that donor units would provide characteristics, *y*, including whether the unit should be deleted, occupancy status, and for occupied units, number and demographic characteristics of the residents, owner/renter status, etc." Fay, *Theory and Application of Nearest Neighbor Imputation in Census 2000*, C01651. *See* also Federal Defendants' Responses to Interrogatories, N.C. App. 9a, 20a. ("[H]ousehold size imputation and occupancy imputation were used.")

The constitutional point is so clear that the appellees are reduced to arguing that the actual enumeration clause does not mean what it plainly says. The appellees argue instead that it means whatever Congress and a political appointee, the Secretary of Commerce, say it means. But this argument ignores the purpose of the actual enumeration clause, to protect the apportionment census from partisan manipulation. *House of Representatives*, 525 U.S. at 348-9 (Scalia, J., concurring) ("In other words, genuine enumeration may not be the most accurate way of determining population, but it may be the most accurate way of determining population with minimal possibility of partisan manipulation.") This is not a fanciful concern. In recent years the credentials of Secretaries of Commerce have been as politicians and not as statisticians.[10] And it is not exactly unheard of for a partisan majority in Congress to pass legislation for largely partisan purposes. From the founding of the republic until the Clinton Administration, the position of the federal government was that the actual enumeration clause barred statistical sampling. The unprecedented flip-flop of the Clinton Administration on this question, and the sampling-based reversal of political fortune between Utah and North Carolina in this case, shows that the framers were correct – the census does need protection.

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[10] The current Secretary, Donald L. Evans, was Chairman of the Bush/Cheney 2000 election campaign. His predecessor, Norman A. Mineta, was a member of the House of Representatives for 20 years. His predecessor, William M. Daley, of the Chicago Daleys, was a Clinton campaign official in 1992 and a Democratic National Convention official in 1996. His predecessor, Mickey Kantor, was National Chair of the Clinton/Gore campaign in 1992. His predecessor, Ronald H. Brown, was the Chairman of the Democratic National Committee.

Moreover, it cannot be denied that Congress' role in prescribing how the decennial census will be conducted is subject to constitutional limits. So much of the language of *Wisconsin v. City of New York* as implies otherwise is wide of the mark: "[T]he text of the Constitution vests Congress with virtually unlimited discretion in conducting the decennial 'actual Enumeration." 517 U.S. 1, 19 (1996). *Marbury v. Madison*, 5 U.S. 137 (1803) and innumerable cases thereafter stand for the proposition that Congress may not transgress the Constitution in the exercise of its discretion to enforce it. The constitutional requirement of an "actual Enumeration" of "the whole number of persons in each State" operates as a limit on congressional discretion. The ban in § 195 of the Census Act on statistical sampling is consistent with this limited view, and was so construed by this Court in *House of Representatives*. The purpose of the constitutional language is to forbid the use of *any* statistical estimation in apportionment count whether it is in the data collection, data processing or any subsequent stage. Neither "hot deck" imputation nor any other speculative, estimation or statistical device that can result in adding to the decennial census persons not actually counted is constitutionally allowable. The Constitution means what it says when it speaks of an actual enumeration and it refutes the idea that the census can be conducted by conjuring up phantom or virtual people who have not been identified in an actual headcount of whole persons.

The growth of the American population, the increasing sophistication of statistics as a scientific methodology or the emergence of practical problems for the Bureau of the Census and the Commerce Department in conducting the census on a limited budget do not authorize the erosion of constitutional boundaries defined in clear, unequivocal language. If the Constitution requires reform to match the demands of the times, then amendment remains an available remedy. U.S. Const. Art. V.

Under the Constitution, the census plays a crucial role in allocating representation in Congress, of primary importance to the population of affected States, and in the functioning of the Electoral College, of importance to all Americans. The census is the level playing field that assures public confidence in the essential fairness of the selection of the President. *See* generally, *Bush v. Gore*, 531 U.S. 98 (2000)

In this case, the people of Utah have experienced a substantial loss of national political power because 1.2 million imaginary people were added to the apportionment count by means of imputation. This is forbidden by the actual enumeration clause and so the judgment of the district court should be reversed.

CONCLUSION

For the foregoing reasons, 13 U.S.C. § 195 should be construed to prohibit all forms of imputation, including nearest neighbor imputation, in the decennial apportionment count. The actual enumeration clause should be construed to mean what it says. It requires an actual enumeration and prohibits inclusion in the count people who can be "counted" only by statistical methods of estimation. The judgment of the lower court should be reversed, and the apportionment count should be declared to be that obtained in compliance with the Census Act and the actual enumeration clause.

Respectfully submitted,

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